

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCE  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of

AVEN, Michael

Serial No. 09/491,708

Filed: January 26, 2000

For: NON-AQUEOUS EMULSIFIABLE CONCENTRATE FORMULATION

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Art Unit: 1616

Examiner: Pyror

BRIEF ON APPEAL

Sir:

This appeal is from the examiner's rejection of October 15, 2002 and further from the advisory action of March 3, 2003.

REAL PARTY IN INTEREST

The real party in interest is BASF Aktiengesellschaft of Ludwigshafen, Germany.

Reel 010585, Frame 0634, recorded on January 26, 2000.

RELATED APPEALS AND INTERFERENCES

To appellants' knowledge and belief, there are no interferences or other appeals which will directly affect or be directly affected by or have a bearing on the Board's decision in this application.

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### STATUS OF CLAIMS

Claims 1-3, 6-8, 11, and 15-17 remain in the application and stand rejected under 35 USC §103(a) as being unpatentable over Valcke et al. (US 5,714,507).

### STATUS OF AMENDMENTS

Claims 1 and 15 were amended in applicants' reply mailed January 14, 2003, and claim 12 was canceled therein. These amendments have been entered by the examiner for purposes of appeal.

### SUMMARY OF INVENTION

The present claims are drawn to a non-aqueous emulsifiable concentrate containing at least one azole derivative having a free hydroxy group, one or more alkoxyates of an aliphatic alcohol, one or more anionic dispersants, and one or more polar aprotic organic solvents. In addition, the non-aqueous emulsifiable concentrate may contain at least one additional fungicidally active compound, one or more non-ionic dispersants, one or more non-polar organic solvents, and one or more defoamers. Each of the above ingredients is present in a specified range of amounts. The dependent claims further specify the identities of these ingredients. Additionally, one claim is drawn to a method for combating a fungus using a diluted aqueous formulation of the emulsifiable concentrate.

### ISSUES

Whether claims 1-3, 6-8, 11, and 15-17 are unpatentable under 35 USC § 103 as being obvious from the disclosure of Valcke et al. (US 5,714,507).

### GROUPING OF CLAIMS

The claims have not been argued separately, and will not be argued separately here.

### ARGUMENTS

The following legal authorities are relied on in the following arguments in the order in which they are cited:

*In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988);

*In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992);

*In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986);

*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

### THE REJECTIONS

The examiner has not demonstrated that the present claims are *prima facie* obvious in view of the disclosure found in Valcke et al. To establish *prima facie* obviousness, the examiner must show in the prior art a teaching or suggestion of each

claim element, some suggestion or motivation to make the claimed invention, and a reasonable expectation for success in doing so (see, e.g., *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986); *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). These requirements have not been met.

The examiner asserts that Valcke discloses

an emulsifiable concentrate comprising a compound of formula a1 (metconazole), an alkoxylated alcohol (polyethylene oxide with propylene glycol or nonylphenol polyethoxy ethanol), an aprotic solvent (methylpyrrolidone), [a] silicone material ([s]ilicic acid), and an anionic surfactant (dispersant).

(office action of October 15, 2002 p.3.) In the examiner's opinion, the sole differences between the present claims and the disclosure of Valcke lie in the number of carbons found in the alkoxylated alcohols, and in the percentage ranges set forward in the claims (*id.*). Motivation to make the appropriate changes to the Valcke disclosure allegedly arises from a desire to develop an effective composition (*id.*).

The examiner's characterization of Valcke glosses over the variety of possible fungicidal formulations disclosed therein, and does not reflect an accurate and fair reading of that reference. While it is true that Valcke discloses the possibility of using the enumerated ingredients, it is nowhere evident that the reference contemplates using those particular ingredients together, nor in the form of an emulsifiable

concentrate.

Valcke discloses, broadly, "compositions comprising (I) metconazole, ... (II) at least one other fungicidal triazole, ... and a carrier" (col.1:21-26). The active ingredients (I) and (II) are to be used alone or in "formulations ... prepared following art-known procedures," including emulsifiable concentrates (col.5:56-66). A number of columns are dedicated to enumerating the various "solvents, solid carriers and ... surface-active compounds" which may be used to produce the wide range of contemplated "formulations" (col.5:63-64; see col.6:11-col.9:13). Valcke further discloses particular general formulations that are preferred, and yet emulsifiable concentrates are not among these further-discussed formulations (see col.9:14-col.11:4).

The only emulsifiable concentrates formulations disclosed by Valcke are the formulations of example 2. Formulations 2a-2d each contain metconazole, bromuconazole, octylphenol polyethylene glycol ether, calcium dodecylbenzenesulfonate, castor oil polyglycol ether, cyclohexanone, and a dimethylbenzene mixture (col.14:54-61). Formulations 2e-2h contain metconazole, tebuconazole, calcium dodecylbenzenesulfonate and either castor oil polyglycol glycol ether (2e, 2h) or tributylphenol polyethylene glycol ether and cyclohexanone (2f, 2g) (col.14:64-col.15:6). None of these formulations contains an alkoxylate of an aliphatic alcohol.

Accordingly, Valcke does *not* disclose "an emulsifiable concentrate comprising a

compound of formula a1 (metconazole), [and] an alkoxyated alcohol" as contemplated by the present claims (office action of October 15, 2002 p.3.). Further, Valcke gives no suggestion to one of skill in the art that emulsifiable concentrates as contemplated in the present claims would be desirable. The examiner broadly alleges that Valcke suggests this, and yet there has been no specific showing that such is actually the case.

As applicants have set forward previously, Valcke discloses that "compositions comprising particular ratios of metconazole and another fungicidal triazole exhibit synergistic fungicidal activity" (col.1:18-20). These synergistic mixtures are administered to "the aboveground parts of plants, ... to the soil ... with a liquid composition ... [or] in a solid formulation," or are "coated on seeds" or used "as wood-preserving agents" (col.4:1-17).

In administering these synergistic mixtures, Valcke contemplates that "the active ingredients ... are [either] used in unmodified form or [are mixed] together with adjuvants *conventionally employed in the art of formulation*" (col.5:56-58). Where the active ingredients are mixed with adjuvants, these formulations,

i.e., the compositions, preparations or mixtures containing the active ingredients and, where appropriate, a solid or liquid adjuvant, *are prepared following art-known procedures.* (col.5:58-61)

Among these art-known procedures are "mixing and/or grinding the active ingredients with extenders, e.g. solvents, solid carriers and, where appropriate, surface-active

compounds (surfactants)" or making

emulsifiable concentrates, directly sprayable or dilutable solutions, dilute emulsions, wettable powders, soluble powders, dusts, granulates, and encapsulations in ... polymer substances. (col.5:62-col.6:1)

Valcke then states that the various formulations will require appropriate carriers and adjuvants based on the intended objectives for their use, and that

in general different compositions with different characteristics will be required for use in plant protection on the one hand, and for use in material protection on the other. (col.6:1-8)

The carriers and adjuvants "equally useful in both types of compositions" are described in the paragraphs immediately following this statement (col.6:9-10; col.6:11-col.7:53).

Those which "in particular relate to compositions for use in plant protection" follow thereafter, with those which "in particular relate to compositions for use in wood protection" being discussed finally (col.7:54-55; col.7:60-col.8:47; col.7:48-49; col.7:53-col.11:4).

Given that the cited reference discloses that emulsifiable concentrates are to be "*prepared following art-known procedures*," it naturally follows that this reference *cannot* be cited for any advances in this technical area (col.5:61). The carriers and adjuvants disclosed by Valcke are either *generally* suitable for all contemplated compositions, or are particularly suitable either for plant protection compositions *generally* or for material protection compositions *generally*. Guidelines for producing any given composition, including selection of the particular components, are accomplished "*following art-known*

*procedures*" (col.5:61). To demonstrate that one of skill in the art would pick and choose among the long lists of *generally* suitable carriers and adjuvants given in Valcke and be motivated to produce an emulsifiable concentrate similar or identical to that of the present invention, the examiner would *of necessity* be compelled to show from the specific examples of *emulsifiable concentrates* in Valcke, or from *another source*, that such a combination is in keeping with "*art-known procedures*" (col.5:61). Since Valcke is the only reference cited to demonstrate that one of skill in the art would produce an emulsifiable concentrate similar to that of the present claims, the examiner can *only* rely on the specific examples of such compositions recited therein.

The examiner's assertion that Valcke discloses using alkoxyated alcohols in emulsifiable concentrates has no basis in fact in the cited reference. The recitation of polyethylene oxide/polypropylene glycol adducts and nonylphenol polyethoxy-ethanols is quite general, and may apply to any of the various compositions contemplated by Valcke. The only positive recitation of emulsifiable concentrates envisioned by Valcke excludes these elements, and the examiner has given no statement as to why one of skill in the art would be motivated to replace the surfactants actually employed with other, less preferred, surfactants (compare, e.g., col.7:15-16 ("[n]on-ionic surfactants are *preferably* polyglycol ether derivatives," emphasis supplied) with col.7:21-23, ("[f]urther *suitable* [though not *preferred*] non-ionic surfactants are the ... adducts of polyethylene oxide with polypropylene glycol," emphasis supplied)).




Furthermore, applicants expressly indicate in their specification that the prior art does not suggest the possibility of producing emulsifiable concentrates comprising metconazole and alkoxyated alcohols (p.2:8-9). The examiner has not pointed to any information contradicting this assertion.

CONCLUSION

In view of the above remarks, applicants respectfully submit that Valcke et al. neither teaches nor suggests the claimed non-aqueous emulsifiable concentrates. Accordingly, applicants request that the rejection of claims 1-3, 6-8, and 15-17 under 35 USC §103(a) be withdrawn.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,  
KEIL & WEINKAUF

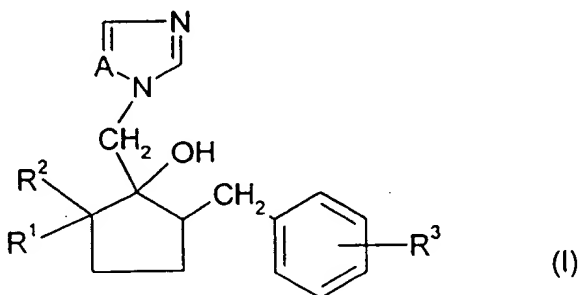
  
David C. Liechty  
Reg. No. 48,692

1350 Connecticut Ave., N.W.  
Washington, D.C. 20036  
(202)659-0100

DCL/kas

APPENDIX

1. A non-aqueous, emulsifiable concentrate (EC) formulation for fungicidal crop protection active compounds which comprises
  - (a1) 50 to 300 g/L of at least oneazole derivative having a free hydroxy group or a salt or an adduct thereof;
  - (a2) optionally 50 to 500 g/L of at least one additional fungicidally active compound;
  - (b) 100 to 700 g/L of one or more alkoxyates of an aliphatic alcohol,
  - (c) up to 100 g/L of one or more non-ionic dispersants,
  - (d) 10 to 100 g/L of one or more anionic dispersants,
  - (e) 50 to 600 g/L of one or more polar aprotic organic solvents selected from the group consisting of N-alkylpyrrolidones, N-cycloalkylpyrrolidones, N-hydroxyalkyl-pyrrolidones and lactones,
  - (f) up to 500 g/L of one or more non-polar organic solvents, and
  - (g) up to 5 g/L of one or more defoamers.
2. A formulation according to claim 1 wherein component (a1) is a compound of formula I



in which

$R^1$  and  $R^2$  each independently represent hydrogen atom or an optionally substituted alkyl, alkenyl, alkynyl or alkadienyl group;

$R^3$  represents a halogen atom or an optionally substituted alkyl, alkenyl, alkynyl, alkadienyl, alkoxy or aryl group;

A represents a nitrogen atom or a CH group; and

n represents an integer from 0 to 2.

3. A formulation according to claim 1 wherein component (a1) is metconazole.
4. (canceled)
5. (canceled)
6. A formulation according to claim 1 wherein said alkoxylate of an aliphatic alcohol (b) is a  $C_{5-20}$  alcohol being alkoxylates with 1 to 20  $C_{2-6}$  alkoxy groups.
7. A formulation according to claim 5 wherein said the alkoxylate (b) is a straight-chained or branched  $C_{7-19}$  alcohol being ethoxylated with 4 to 18 ethoxy and/or propoxy groups, or a mixture thereof.
8. A formulation according to claim 1 wherein the ratio of the crop protection active compounds (1) to said alkoxylates of an aliphatic alcohol (b) is between 1:0.5 and 1:100.
9. (canceled)
10. (canceled)

11. A formulation according to claim 1 wherein the polar aprotic solvent (e) is immiscible with water.
12. (canceled)
13. (canceled)
14. (canceled)
15. An EC according to claim 1 wherein the defoamer (g) is selected from the group comprising perfluoroalkyl-phosphonic acids, perfluoroalkylphosphinic acids and mixtures thereof, and which additionally comprises a silicone-based defoamer.
16. A method for combating a fungus at a locus which comprises emulsifying a formulation as claimed in claim 1 with water and treating said locus with the obtained diluted aqueous formulation.
17. A formulation according to claim 8 wherein the ratio of the crop protection active compounds (a) to said alkoxylates of an aliphatic alcohol (b) is between 1:1 and 1:10.